



Conventional LEO to GEO transfer

- Hohmann transfer (two-impulse, minimum energy) with high-thrust chemical thrusters
 - impulses imparted at apogee and perigee of transfer orbit (GTO)
 - ΔV s from LEO to GEO
 - $\Delta V_1 = 2.2\text{-}2.4$ km/s (GTO insertion)
 - $\Delta V_C = 1.4$ km/s (GEO circularization)
 - transfer time $\approx 5:20$ hr:min
- Continuous low-thrust propulsion
 - orbit slowly spiraling outwards
 - total $\Delta V = 4.2\text{-}4.6$ km/s (with final circular orbit)
 - transfer time $\approx 2\text{-}6$ month

